

REMARKS

The Examiner is thanked for the thorough review and consideration of the present application. The final Office Action dated July 24, 2003 has been received and its content carefully reviewed.

By this Response, claim 1 has been amended. Also, a replacement sheet is filed herewith to amend FIG. 4 in accordance with the approved proposed changes filed on May 13, 2003. No new matter has been added. Claims 1-20 are pending in the application. Reconsideration and withdrawal of the objection and rejections in view of the above amendment and the following remark are requested.

In the Office Action, claim 1 was objected to because of an informality. Applicants have amended claim 1 to correct the informality. Accordingly, the objection is overcome.

Claims 1-10 and 12-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,926,234, issued to Shiraki et al. ("Shiraki") in view of the Related Art. Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Shiraki, the Related Art and further in view of U.S. Patent No. 5,889,568, issued to Seraphim et al. ("Seraphim"). Applicants traverse the rejections because neither Shiraki, the Related Art nor Seraphim, analyzed alone or in any combination, teach or suggest the combined features recited in the claims of the present application. In particular, Shiraki, the Related Art and Seraphim fail to teach or suggest an in-plane switching liquid crystal display device having, among other features, "a plurality of electrostatic discharge devices in the non-display region, wherein each electrostatic discharge device is at a distance of more than one pixel pitch from the pixels", as recited in independent claim 1.

Based upon the teachings of Shiraki, the Office Action alleges that it would have been obvious to the ordinary artisan at the time the invention was made to modify the invention of Shiraki by using the in-plane switching of the Related Art for the purpose of increasing the viewing angle of the device. The Office Action further alleges that it would have been obvious to an ordinary artisan to further modify the invention of Shiraki by having a 1 mm pixel pitch, as disclosed in Seraphim, for the purpose of simplifying the fabrication process.

On page 3 of the Office Action, the Examiner incorrectly equates the plurality of discharge devices of the present application to element 10, a protective circuit, of Shiraki. Applicants respectfully submit, "as shown in FIG. 3, in the protective circuit 10, two thin-film

transistors (hereafter referred to as TFT) 10a and 10b connected in parallel are formed as the second MOS transistors. The respective source electrodes (S) of TFTs 10a and 10b are connected to the other gate electrode (G) and the drain electrode (D). The source electrode (S) of the TFT 10a is connected to the gate electrode (G) and the drain electrode (D) of the TFT 10b and is also connected to one of the input-output pads 6 through the connection line 11. The source electrode (S) of the TFT 10b is connected to the gate electrode (G) and the drain electrode (D) of the TFT 10a, and is also connected to the other one of input-output pads 6.” (Col. 9, lines 31-46). Additionally, Shiraki fails to teach or suggest electrostatic discharge devices at “a distance of more than one pixel pitch from the pixels”. As such, Shiraki fails to teach or suggest “a plurality of electrostatic discharge devices in the non-display region, wherein each electrostatic discharge device is at a distance of more than one pixel pitch from the pixels”, as recited in independent claim 1.

Seraphim discloses a large flat panel display in which manufacturing yield is significantly improved by utilizing a large number of small area displays mounted on a common substrate and electrically interconnected to replicate the function of a large area display (Col. 2, lines 62-76). Seraphim further discloses “a one mm pixel pitch, in an array for a 35 to 40 inch TV application” which could be used with the manufacturing infrastructure of the Seraphim invention (Col. 15, lines 45-46). However, Seraphim indicates that “use of a smaller pixel pitch would facilitate work stations and high end computer applications.” And, “to achieve higher line density, the space used for interconnection at the tile edges and for sealing of the tiles should be made as small as possible” (Col. 15, lines 42-49). Thus, there is no teaching in Seraphim that would motivate one of ordinary skill in the art to provide a range for a pixel pitch “between 1 mm to about 1.5 mm” as recited in dependent claim 11.

Applicants respectfully submit that no combination of Shiraki, the Related Art and Seraphim teach or suggest an in-plane switching liquid crystal display device having the combined features recited in the claims of the present application. As such, claim 1 and its dependent claims 2-20 are patentable over any combination of Shiraki, the Related Art and Seraphim. Reconsideration and withdrawal of the rejections of claims 1-20 are requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue. If the Examiner deems that a telephone conversation

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would further the prosecution of this application, the Examiner is invited to call the undersigned at (202) 496-7500.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. A duplicate copy of this sheet is enclosed

Dated: October 14, 2003

Respectfully submitted,

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